

TREATMENT OF WASTE LIQUID CONTAINING ORGANIC NITROGEN COMPOUND

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Abstract

PROBLEM TO BE SOLVED: To treat waste liquid with small amount of power by oxidizing and decomposing it without using an oxidizing agent and by using small-sized equipment.

SOLUTION: From a waste liquid tank 1, waste liquid 9 consisting essentially of ethanol amine and hydrochloric acid and containing organic nitrogen compounds in which chlorine ions exist is introduced into an electrolyzer 4. Acidic or alkaline liquid is injected from an acid tank 2 or an alkali tank 3 to control the pH value within a range of 5-9, and electrolysis is performed at electrolytic voltage of 4-8V and at current density of 1-30A/dm². At this time, as electrodes, an anode is platinum or lead dioxide and a cathode is platinum or iron or stainless steel. As a result, the waste liquid 9 is oxidized and decomposed from COD concentration of 6000ppm to that of ≤20ppm, thus the treated waste liquid can be discharged to rivers without using an oxidizing agent and with a small amount of power by using a small-sized electrolyzer.

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